

Bimetal measuring instruments

Application	Bimetal measuring instruments are used for monitoring the load ratios and conditions of electrical distribution installations. Due to their thermal inertia, the displayed measured values equal the rms value of the current; a built-in slave pointer is used to show the maximum values.
Measuring systems	<ul style="list-style-type: none"> ● Highly robust ● Ultra high torque ● Trunnion bearing ● Setting time 8 min or 15 min
Design	Bimetal measuring instruments are manufactured according to DIN 60 051 as well as according to the other relevant VDE and DIN regulations. The accuracy amounts to 3 % referred to the full scale. The scale graduation starts at approx. 15 % of the full scale and has a 1.2-fold overload scale. Bimetal measuring instruments show the square mean value of the current, the measured value equals the rms value and is independent of the waveform. Due to the extremely high torque, a slave pointer showing the maximum current may be used. Using a sealable reset button, the maximum pointer (slave pointer) may be reset up to the measuring element pointer. Another model combines bimetal measuring elements with moving-iron measuring elements (class 1.5) inside one housing. This allows for measuring maximum value, mean value and instantaneous value of the current on one scale at the same time. The standard type allows for measuring currents within a frequency range of 15 Hz to 100 Hz. Bimetal measuring systems are resistant to a 1.2-fold overload and moving-iron systems to a 2-fold overload, temporarily also up to a 10-fold overload, for the rest DIN EN 60 051 applies. Moving-iron measuring elements are provided with a shielding against external magnetic fields up to a strength of 4 kA/m. The connection is made using M4 screws (back-of-hand-proof).
Measuring ranges	<p>Bimetal measuring instruments</p> <p>0-5 / 6 A. If connect to current transformer sec. 5 A the scale is designed in a way that the full scale is 20 % higher than the primary current of the current transformer, e.g. current transformer 250 / 5 A, display range 0-300 A.</p> <p>Moving-iron measuring instruments combined with bimetal measuring instruments</p> <p>0- 5 / 10 A. If connect to current transformer sec. 5 A the scale is designed in a way that the full scale is 100 % higher than the primary current of the current transformer, e.g. current transformer 250 / 5 A, display range 0-500 A.</p>
Energy consumption	Bimetal measuring system 1,9 VA for 5 A, 0,9 VA for 1 A combined with moving-iron measuring system 2,5 VA for 5 A, 1,5 VA for 1 A
Special versions	<p>Fixed value between 100 Hz and 1000 Hz</p> <ul style="list-style-type: none"> at bimetal measuring instrument at combined bimetal / moving-iron measuring instrument <p>Extended initial range up to 30 % of full scale in center scale (moving-iron measuring element)</p>